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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/591,632

09/05/2006

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EXAMINER

TAKEUCHI, YOSHITOSHI

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/591,632	Applicant(s) TWIGG, MARTYN VINCENT	
	Examiner YOSHITOSHI TAKEUCHI	Art Unit 4162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10, 15, 16 and 18-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10, 15, 16 and 18-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claims 1-8, 10, 15, 16, 18-24 are presented for examination wherein claims 1, 5-6, 8, 10, 15, 16 and 18 are currently amended and claim 24 is newly added. Claims 9, 11-14 and 17 have been cancelled.

The objection to claim 5 is withdrawn in view of the amendment to the claim.

The 35 U.S.C. § 112 second paragraph rejections of claims 1, 6, 8, 10, 15, 16 and 18 are withdrawn as a result of the amendments to the claims.

Claim Rejections - 35 USC § 102

1. The text of those sections of the Title 35 U.S. Code not included in this section can be found in a prior Office action.
2. Claims **1, 3, 5, 7, and 18-23** are rejected under 35 U.S.C. 102(b) as being anticipated by Foerster et al (US 6,149,973) or, in the alternative, under 35 U.S.C. 103(a) as obvious over Foerster et al (US 6,149,973).
 - a. This office Action incorporates the prior rejections of claims 1, 3, 5, 7, and 18-23, with the following modifications in response to the applicant's amendments:
 - b. Regarding claim **1** and **18**, the amended features "to provide evacuated channel walls" (claim 1) and "to provide isolated and evacuated channels" (claim 18), Foerster does not require steps 4 and 5 of its process to be performed in a particular sequence and the steps themselves do not necessitate that one precede the other. A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art, including nonpreferred embodiments. Merck & Co. v. Biocraft Laboratories, 874 F.2d 804 (Fed. Cir 1989). Here, Foerster suggests to one of ordinary skill in the art that

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one embodiment of Foerster is to first apply the vacuum (step 5, column 7, lines 16-18), which would provide isolated and evacuated channels, and then have the evacuated channel walls contacted with the liquid (step 4, column 7, lines 12-14). As a result, Foerster anticipates claims 1 and 18 of the instant invention.

In the alternative, it would have been obvious to a person of ordinary skill at the time of the invention to switch steps 4 and 5 of the Foerster process, since Foerster does not require steps 4 and 5 of the process to be performed in a particular sequence and the steps themselves do not necessitate that one precede the other.

c. Regarding claim **3**, Forester teaches the method of claim 1 wherein the pressure reduction in the pore structure of the channel walls is maintained during the liquid contacting step (Column 5, lines 18-27, a partial vacuum during the filling and the removal of the catalyst carrier.).

d. Regarding claim **5**, **7**, **22**, and **23**, Forester teaches the method of claim 1, wherein an aqueous liquid (column 8, line 22) containing at least one catalyst component comprises a dispersion of aluminum oxide (column 7, line 47 and column 8, line 42).

e. Regarding claim **19** and **20**, Forester teaches the apparatus of claim 18, wherein the means sealingly isolating a plurality of channels of the ceramic wall-flow filter from the surrounding atmosphere, means for reducing the pressure in the isolated channels to below the surrounding atmospheric pressure thereby to establish a vacuum in the pore structure of the filter walls, at least one reservoir for holding a liquid containing at least one catalyst component or a precursor thereof and means for dosing the isolated and evacuated channels with a pre-determined quantity of the liquid, a pressuisable container

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having a sealable closure for receiving the ceramic filter, and a means for maintaining the reduced pressure in the isolated channels to below the surrounding atmospheric pressure during dosing of the liquid. (Figure 1 and column 6, line 52-column 7, line 26).

f. Regarding claim **21**, Foerster the apparatus of claim 18 wherein the apparatus is at least semi-automatic to control the means for reducing pressure in the isolated channels and the means for dosing the liquid (Column 5, lines 39-65, teaching the rapid removal of liquid is such that “the time between the beginning of the fill cycle and the end of the emptying and clearance extraction amounts to no more than 5 seconds.” Because of the increase in production and short production times, it is implied the Foerster process is at least semi-automatic).

Claim Rejections - 35 USC § 103

3. The text of those sections of the Title 35 U.S. Code not included in this section can be found in a prior Office action.

4. Claims **2, 4, 6, 8, 10, 15**, and **16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Foerster et al (US 6,149,973).

Foerster is applied to the claims for the same reasons stated in the previous Office action.

5. Claim **24** is rejected under 35 U.S.C. 103(a) as being unpatentable over Foerster et al (US 6,149,973) in view of Twigg et al (WO 2004/079167, as evidenced by US 2007/0028604).

Foerster suggests the method of claim 15 with a ceramic catalyst carrier (Column 1, lines 28-34), but Foerster does not teach the ceramic filter made of a thermet, wherein the thermet is selected from a group consisting of $\text{Al}_2\text{O}_3/\text{Fe}$, $\text{Al}_2\text{O}_3/\text{Ni}$ and $\text{B}_4\text{C}/\text{Fe}$.

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Twigg teaches a diesel engine exhaust filter with a particulate filter composed of porous material with a catalyst (abstract), where the filler material is composed of a thermet, such as $\text{Al}_2\text{O}_3/\text{Fe}$, $\text{Al}_2\text{O}_3/\text{Ni}$ or $\text{B}_4\text{C}/\text{Fe}$, or composite comprising segments of two or more thereof (paragraph 0014). As a result, it would have been obvious to a person of ordinary skill at the time of the invention to make the filter taught by Foerster with the filler material taught by Twigg, since Twigg teaches filter with a catalyst, where Twigg teaches specific filler material that is inert, which is an important characteristic for the Foerster filter filler material, since the filler material is a vehicle for carrying the catalyst, and should not react.

Response to Arguments

6. Applicant's arguments filed October 6, 2008 have been fully considered but they are not persuasive.

7. The applicant argues that (1) Foerster does not teach reducing the pressure in the isolate channels and then contacting a liquid to the evacuated channel walls; (2) amending claims 1 and 18 by adding the phrase, "to provide evacuated channel walls," distinguishes the instant invention from Foerster; and (3) the prior obviousness rejection does not address the feature as claimed.

a. Regarding the applicant's first two arguments, the amended features "to provide evacuated channel walls" (claim 1) and "to provide isolated and evacuated channels" (claim 18), Foerster does not require steps 4 and 5 of its process to be performed in a particular sequence and the steps themselves do not necessitate that one precede the other. A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art, including nonpreferred embodiments. Merck & Co. v.

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Biocraft Laboratories, 874 F.2d 804 (Fed. Cir 1989). Here, Foerster suggests to one of ordinary skill in the art that one embodiment of Foerster is to first apply the vacuum (step 5, column 7, lines 16-18), which would provide isolated and evacuated channels, and then have the evacuated channel walls contacted with the liquid (step 4, column 7, lines 12-14). As a result, Foerster anticipates claims 1 and 18 of the instant invention.

In the alternative, it would have been obvious to a person of ordinary skill at the time of the invention to switch steps 4 and 5 of the Foerster process, since Foerster does not require steps 4 and 5 of the process to be performed in a particular sequence and the steps themselves do not necessitate that one precede the other.

b. The examiner finds the applicant's third argument that the obviousness rejection does not address the feature as claimed to be non-persuasive for the reasons given *supra*.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOSHITOSHI TAKEUCHI whose telephone number is (571) 270-5828. The examiner can normally be reached on Monday-Thursday 9:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/
Supervisory Patent Examiner, Art Unit
1793

/Yoshitoshi Takeuchi/